

**PHYSEOPARDY**

Charges

Fill in  
The \_\_\_\_\_

Conductor  
or  
Insulator?

Electric  
Fields

Transferri  
ng Charge

\$100

\$100

\$100

\$100

\$100

\$200

\$200

\$200

\$200

\$200

\$300

\$300

\$300

\$300

\$300

\$400

\$400

\$400

\$400

\$400

\$500

\$500

\$500

\$500

\$500

You have selected an area of the board not in play.

OOPS!

[Click here to go back to the main board](#)

# Charges - \$100

## Electrons

- a. Attract each other.
- b. Repel each other.
- c. Do not interact.

ANSWER

## Charges - \$200

To say that electric charge is conserved means that no case has ever been found where

- a. the total amount of charge on an object has increased
- b. one object has more charge than another object
- c. the total charge on an object has changed
- d. net charge has been created or destroyed
- e. None of the above

ANSWER

## Charges - \$300

Of electrons, protons, and neutrons, which one(s) are found in the nucleus of an atom?

ANSWER

# Charges - \$400

- A conductor differs from an insulator in that a conductor has
- a. more protons than electrons
  - b. more electrons than protons
  - c. more free-moving electrons than an insulator
  - d. None of the above

ANSWER

## Charges - \$500

Why is it called “grounding” or “earthing” when contact with a large object brings an object to neutral charge?

ANSWER



*Fill in the \_\_\_\_\_ - \$100*

Electrons are the \_\_\_\_\_ bits  
of \_\_\_\_\_ charge.

ANSWER

*Fill in the \_\_\_\_\_ - \$200*

Opposite charges \_\_\_\_\_,

Like charges \_\_\_\_\_.

ANSWER

*Fill in the \_\_\_\_\_ - \$300*

Voltage is the \_\_\_\_\_ based on  
\_\_\_\_\_ in an electric field.

ANSWER

*Fill in the \_\_\_\_\_ - \$400*

Electric charges are surrounded by  
\_\_\_\_\_ .

ANSWER

*Fill in the \_\_\_\_\_ - \$500*

A closed empty conductor \_\_\_\_\_  
the inside from outside electric fields.

ANSWER

Conductor or Insulator? - *\$100*

Any metal

ANSWER

Conductor or Insulator? - \$200

plastic

ANSWER

Conductor or Insulator? - \$300

Tap water

ANSWER



Conductor or Insulator? - \$400

air

ANSWER

# Conductor or Insulator? - \$500

Things we charge by  
friction

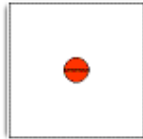
ANSWER

# Electric Fields - \$100

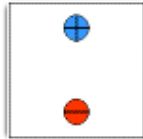
a.



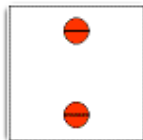
b.



c.



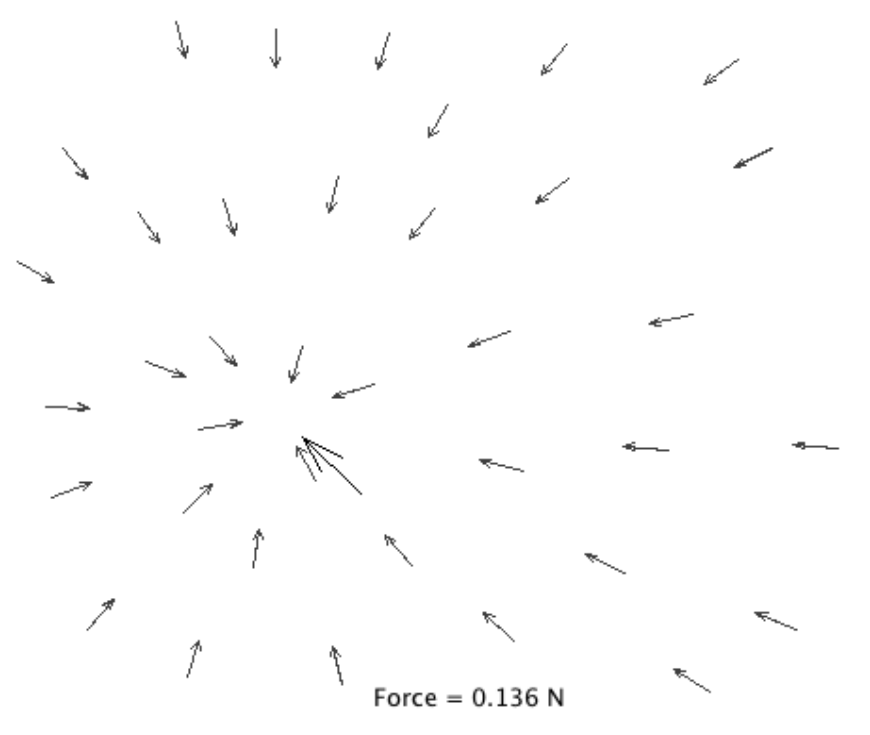
d.



e.



## The E-Field Game



ANSWER

# Electric Fields - \$200

Suppose a hollow metal sphere has a negative charge on it. The electric field strength inside the sphere is

- A. Large and positive
- B. Weak and positive
- C. Zero
- D. Weak and negative
- E. Large and negative

ANSWER

# Electric Fields - \$300

If a small positive charge were released in an electric field, it would move

- A. the same direction that the field arrows point
- B. the opposite direction that the field arrows point
- C. It wouldn't move
- D. It would depend on the size of the positive charge

ANSWER

## Electric Fields - \$400

Suppose you touch a negatively charged object to a metal sphere so that extra electrons move onto the sphere. After the charged object is moved far away, electrons on the sphere will be

- A. distributed in small bunches over the sphere's surface.
- B. distributed evenly over the sphere's surface.
- C. pulled off the sphere along with the charged object.
- D. located in the place the charged object was.

ANSWER

# Electric Fields - \$500

What 2 things do the arrows tell us about an electric field?

ANSWER

## Transferring Charge- *\$100*

Rubbing a balloon against a wool sweater

- a. friction
- b. contact
- c. induction

ANSWER



## Transferring Charge- \$200

Setting a pie tin on top of a charged Styrofoam plate

- a. friction
- b. contact
- c. induction

ANSWER

## Transferring Charge- \$300

John Travoltage drags his feet on the carpet

- a. friction
- b. contact
- c. induction

ANSWER

## Transferring Charge- \$400

John Travoltage touches the door knob and gets a shock

- a. friction
- b. contact
- c. induction

ANSWER

## Transferring Charge- \$500

A neutral ball of aluminum foil is attracted to a negatively charged PVC pipe

- a. friction
- b. contact
- c. induction

ANSWER

\*\*\*\**Answers*\*\*\*\*

# Charges - *\$100*

## Electrons

- a. Attract each other.
- b. Repel each other.**
- c. Do not interact.

DONE

# Charges - \$200

To say that electric charge is conserved means that no case has ever been found where

- a. the total amount of charge on an object has increased
- b. one object has more charge than another object
- c. the total charge on an object has changed
- d. net charge has been created or destroyed**
- e. None of the above

DONE

Charges - *\$300*

Protons and Neutrons

DONE



# Charges - \$400

A conductor differs from an insulator in that a conductor has

- a. more protons than electrons
- b. more electrons than protons
- c. more freely-moving electrons than an insulator**
- d. None of the above – electrons loosely bound

DONE

# Charges - \$500

It is called “grounding” or “earthing” when contact with a large object brings an object to neutral charge because...

The earth (ground) is soooooooo big it can give or take many electrons and still be roughly neutral.

DONE

*Fill in the \_\_\_\_\_ - \$100*

**“moveable”**

**“negative”**

DONE

*Fill in the \_\_\_\_\_ - \$200*

**“attract”**

**“repel”**

DONE

*Fill in the \_\_\_\_\_ - \$300*

“potential”  
“position”

DONE

*Fill in the \_\_\_\_\_ - \$400*

**“electric fields”**

DONE

*Fill in the \_\_\_\_\_ - \$500*

**“shields”**

DONE

Conductor or Insulator? - *\$100*

Any metal  
= **Conductor**

DONE



Conductor or Insulator? - \$200

plastic

= **Insulator**

DONE

# Conductor or Insulator? - \$300

Tap water  
= **Conductor**

DONE

Conductor or Insulator? - \$400

air

= **Insulator**

DONE

# Conductor or Insulator? - \$500

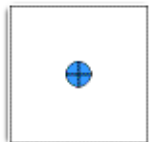
Things we charge by  
friction

= **Insulator**

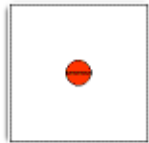
DONE

# Electric Fields - \$100

a.



b.



c.



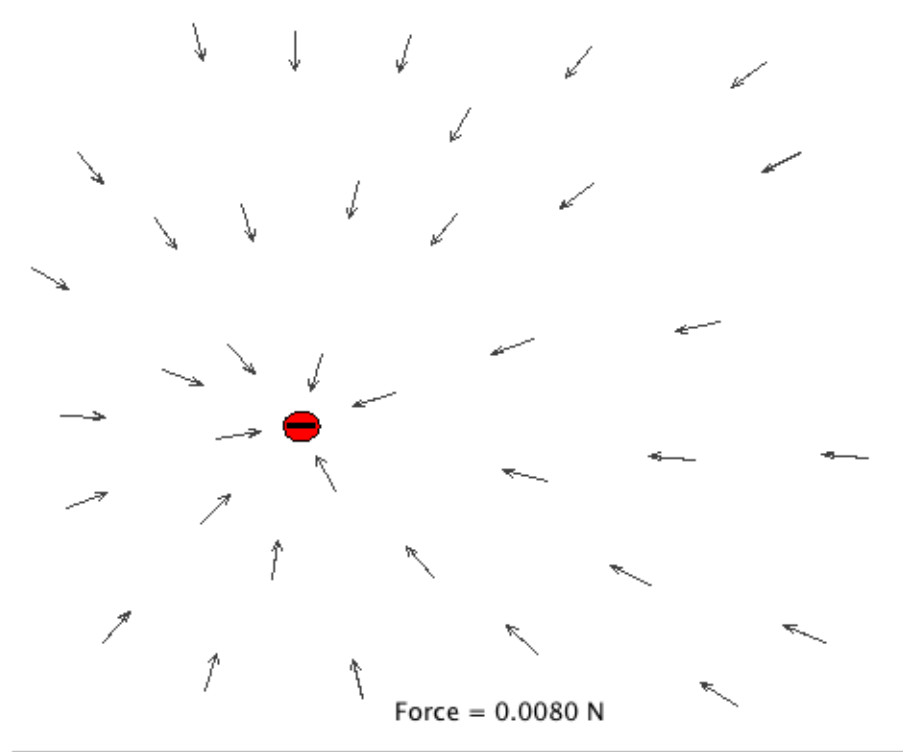
d.



e.



## The E-Field Game



DONE

# Electric Fields - \$200

Suppose a hollow metal sphere has a negative charge on it. The electric field strength inside the sphere is

- A. Large and positive
- B. Weak and positive
- C. Zero**
- D. Weak and negative
- E. Large and negative

DONE

# Electric Fields - \$300

If a small positive charge were released in an electric field, it would move

- A. the same direction that the field arrows point
- B. the opposite direction that the field arrows point
- C. It wouldn't move
- D. It would depend on the size of the positive charge

DONE

# Electric Fields - \$400

Suppose you touch a negatively charged object to a metal sphere so that extra electrons move onto the sphere. After the charged object is moved far away, electrons on the sphere will be

A. distributed in small bunches over the sphere's surface.

**B. distributed evenly over the sphere's surface.**

C. pulled off the sphere along with the charged object.

D. located in the place the charged object was.

DONE



# Electric Fields - \$500

Strength of the field  
& direction of the field

DONE

# Transferring Charge- *\$100*

Rubbing a balloon against a wool sweater

- a. **friction**
- b. contact
- c. induction

DONE

# Transferring Charge- \$200

Setting a pie tin on top of a charged Styrofoam plate

- a. friction
- b. contact
- c. induction**

DONE

# Transferring Charge- \$300

John Travoltage drags his feet on the carpet

- a. **friction**
- b. contact
- c. induction

DONE

# Transferring Charge- \$400

John Travoltage touches the door knob and gets a shock

- a. friction
- b. contact**
- c. induction

DONE

## Transferring Charge- \$500

A neutral ball of aluminum foil is attracted to a negatively charged PVC pipe

- a. friction
- b. contact
- c. **induction**

DONE

# Directions for Changing the Game

- To change the questions and answers, just type over the problems...Use the “replace” feature to change the categories easily
- The daily doubles were originally set to category #4 for \$500 and category #2 for \$300
- To change the daily doubles you must
  - 1. Change the hyperlink for the links on the main board to go to the appropriate question, therefore bypassing the daily double slide
  - 2. Change the hyperlink on the continue button on each daily double slide to go to the new question.